Before The

Federal Communications Commission

Washington, D.C. 20554

In The Matter of

Inquiry into Encryption Technology
For Satellite Cable Programming

PP Docket No. 92-234

REPLY COMMENTS OF DECTEC INTERNATIONAL INC.

DECTEC Intl. Inc.
PO Box 2275
1962 Mills Road
Sidney, BC
Canada V8L 3S8
(604)655-4463

Dated January 21, 1993.

TABLE OF CONTENTS

SUMMARY

The original comments filed in the Commission's inquiry into satellite/cable encryption technology in docket 92-234 were fairly in line with what we expected. In our reply, we concur in general with much of the technical comments provided by Scientific Atlanta and Titan. However, we reproach General Instrument Corporation for its arrogant and caustic verbiage which leads the company to several unfounded and specious conclusions. As well, we take issue with certain incongruities expressed in the comments filed by Home Box Office.

As would be expected, GIC argues against the sharing of its DBS authorization center with would-be competitors. It should be noted that while GIC raises several issues which intend to support their position, in reality (and for good business reasons), General Instrument simply does not want competition.

As a competitor who invested several million dollars to provide the HSD market with a competitive alternative to GIC's Videocipher products, it is through our own experience that we believe General Instrument can be expected to rely on misleading information to further their own interests in this matter.

I. ACCESS TO PROGRAMMING THROUGH GIC's DBS CENTER

Access to GIC's DBS Center is not necessarily critical to enable competition in the supply of compatible HSD decoding equipment. What is crucial is access to programming. A decoder manufacturer, like DECTEC, is not able to effectively market a decoder through an independent DBS facility if programmers do not allow consumers to be authorized to receive programming through such a facility.

What obstructed DECTEC's entrance into the marketplace in 1991 and 1992 was programmers' reluctance to authorize units through an independent center. The programmers we spoke with said that they would welcome the S.U.N. decoder into the HSD market if GIC would allow S.U.N. authorizations to flow through the DBS Center.

What is at issue then is not access to the DBS Center per se, but access to programming. If the programmers conclude that for reasons pertaining to cost, accountability, security, management or any other factor, that access to their service may only be provided through one single authorization center, then this single facility becomes "essential" to doing business in the HSD market.

If access to the DBS Center is not "essential" then cable programmers should be required under the new Cable Act to provide independent authorization centers with fair and equitable access

to programming. The 102nd U.S. Congress recognized that vertically integrated programmers discriminated in the terms and availability of services as a means to favor their cable brethren. While the new law provides that vertically integrated cable programming services are prohibited from engaging in unfair methods or competition, or unfair acts or practices that hinder significantly or prevent any multichannel video programming distributor from providing programming to consumers, we suggest that the meaning of multichannel video distributor includes alternative and competitive decryption/encryption system providers within the HSD market.

With the task now before the Commission to promulgate rules in accordance with the program access provision of the 1992 Cable Act, DECTEC believes that in following the intent of the Act which is to bring about competition in the video distribution marketplace by assuring competing technologies access to vertically integrated programming, the FCC will find it necessary to either 1) regulate one single and common and neutral HSD authorization center so that it may be used by competing HSD technologies, or 2) require that vertically integrated programmers do not discriminate amongst HSD authorization providers (i.e. by providing competing encryption/decryption vendors with equitable access to the programmer's HSD network).

II. ACCESS TO THE GIC DBS AUTHORIZATION FACILITY

Proceeding with the view that the HSD industry would operate most efficiently if all competitive encryption/decryption systems interfaced through a single DBS authorization center, DECTEC refutes each of the arguments presented by GIC to both deter access to the GIC center and to discourage the adoption of a neutral and regulated shared facility.

> 1. At page 19 in GIC's comments, the company says "it is a basic tenant of sound security practise to limit the number of persons with access to the system."

In reply, General Instrument has misinterpreted the above quote. It is not true, as GIC suggests, that if a number of competing providers share a facility then security risks will increase, but it is instead the case that where there are a number of human operators with access to authorization operations, the chances of a security leak are greater. As the center is operated by GIC, it is only GIC who may increase security risks at the facility.

The technical authorization data passes through a conduit controlled by GIC. They are the Gatekeeper so-to-speak. GIC staff would therefore have access to this confidential authorization data and would undoubtedly be tempted to sabotage a competitor's security. DECTEC agrees with Titan when they state on page 37 of

their comments that "the practicality of such joint use would hinge on whether such a center was operated by a true, independent operator functioning much as a standard regulated utility."

> 2. Continuing in this vein, GIC relies on the fallacy that multiple systems would create greater security risks. And they point to their concern that the presence of multiple systems would make it difficult for them to honor contracts between themselves and programmers whereby GI is to contain security breaches.

In response: DECTEC finds it hard to offer sympathy to GIC for establishing contractual agreements that are dependent on the existence of a noncompetitive marketplace. In fact, it is our belief that certain stipulations were introduced into contracts by GIC as a means to keep competition out of the market. However, the presence of multiple systems would not interfere with GIC's contractual obligation to contain security breaches within their own products.

Each competing manufacturer can be held accountable and answerable for any security breach within his system alone. It is only possible for a pirate to calculate a "break" if he has both the "padlock" (which is the smartcard) and the corresponding "key" (which is the information sent by the programmer). As part

of normal, preventative system security procedure, both the smartcard and programmer information can be changed at will, at anytime. The movement of different and competing authorization information in the same data stream transmission has no fundamental bearing on system security whatsoever.[1]

Let it also be noted that it is DECTEC's considered opinion that GIC has exaggerated it's claim of having spent $100 million on securing the VCII system. We have reason to believe that GIC did not make any competent engineering effort to secure the VCII system until the time came when GI found it most beneficial to their bottom line.[2]

3. At page 23 of the GIC comments, General Instrument points to a 1977 statement by the Department of Justice regarding electronic fund transfers. GIC raises the concern that progress and innovation would be "seriously hampered" should competitive decoder manufacturers be allowed access to the GIC DBS Center. It is actually more the case that the converse would be true.

[1] To illustrate this point, last summer the RCMP (Royal Canadian Mounted Police) confiscated both a VCII and a S.U.N. decoder from a Canadian dealership. After analysis, the RCMP found that the VCII was pirating signals while the S.U.N. unit was not. This illustrates the point that at that time, the smartcard in the DECTEC S.U.N. decoder was secure when the VCII decoder had been pirated.

[2] DECTEC is able to provide technical evidence and engineering documentation which more than suggest GIC's incompetence in controlling and maintaining the security of the original VCII.

For example, DECTEC's Authorization Center equipment takes up the space of a single office desk. This equipment is ten times more powerful than the present GIC DBS Authorization Center. In the near future, authorization equipment with vastly improved efficiency and capacity will fit inside a suitcase. It is a myth that the construction of an authorization center is based on some special science or rare black art.[3]

4. Further rational presented by GIC to dissuade shared use of their DBS Center rests on their own licensing agreements with programmers, which GIC has pointed to in threatening removal of its technical support. As Titan states in pages 33 and 34 of its comments, "such threats or arrangements are not only barriers to contract agreements, but are chilling to the market and abusive of monopoly power and patent positions."

[3] The DBS Center can be viewed similar to the point of presence facility operated by local phone carriers. The POP serves as a central point through which callers interface with independent long distance carriers. The carriers pay an access fee for use of the POP, which is regulated. It has not been the case that innovation has been stifled because all carriers interface through one central point. In fact because of the existence of a regulated central switching base,carriers have focused on reducing costs, improving features, and developing ISDN-based fiber optic infrastructures. The authorization center is not at the heart of innovative engineering. It's tenants are fairly simplistic and overrated.

GIC confirms Titan's comments when it states within its own filing that "It would be a violation of the control computer software licenses to use such software to insert another manufacturer's authorization data stream at a programmer's uplink." [4]

In response, DECTEC points to the industry's move into a digital environment through which educational and entertainment resources will be interconnected throughout the world. DECTEC strongly believes that we must avail ourselves of the future and not create artificial limitations on access and distribution to further any single interest.

With this vision as our driving aim, we believe that telecom vendors will promote interoperability by encouraging the open licensing of technologies. GIC's rather authoritarian position on licensing is narrowminded and archaic. It appears that GIC's comment here clearly contradicts their claim that they would openly license both their HDTV and digital compression technologies (should they be selected) in order to encourage compatibility and interoperability with competitive digital

4 While the uplink signal is the property of the programmer, it is GIC who controls how that property may be used.

systems in America and throughout the world.[5]

Scientific Atlanta (at pages 8,9 and 12,13 of their comments) offers a cogent position which emphasizes the importance of developing an interoperable competitive market. Specifically SA states, "The need for a standard that provides interoperability is even more important now than when NTSC, PAL, SECAM were established because of the multiple delivery paths for television and the growing interface requirements with computers as well as consumer electronics."

"It is increasingly important," states SA in the same comments, "that we consider interoperability on a global scale rather than just on a domestic scale. Organizations such as the ISO, IEC, CCIR, and CCITT provide the vehicle for establishing the requirements and standards for global interoperability."
And finally at page 12 and 13, SA concludes that the "TVRO market will still operate in a hybrid analog/digital world for many years, and to the extent the analog encryption market remains uncompetitive, the TVRO market will continue to suffer from the problems which exist today."

[5] Similarly, the current president of the GIC-Videocipher division broke his promise to the U.S. Congress in 1986 (see our initial comments at H) when he stated that the Videocipher technology would be licensed to several competing manufacturers. GIC's statement in its comments to the FCC at page 10 that "no empirical evidence that any meaningful control over supply of those modules (VCII) has ever existed," is highly arrogant, and it's a brazen lie.

III. INDEPENDENT AUTHORIZATION CENTERS

Following GIC's arguments against a shared facility, the company recommends the use of alternative authorization centers by pointing to DirecTv and Sky Pix who will each establish and operate their own facilities. DECTEC does not oppose this recommendation as long as, like DirecTV and Sky Pix, DECTEC and others hoping to serve the HSD marketplace will be assured access to programming as set forth in the Cable Act of 1992.

GIC uses a footnote in its discussion of independent authorization centers to articulate its unbridled repugnance for certain high tech companies, apparently Canadian, as it singles out both Leitch Corporation and DECTEC International.

For the Commissions background (and to set the record straight), it is widely publicized that throughout 1990, Leitch, together with Uniden Corporation and Oak Communications (now TV Com) invested several million dollars in the development of a smart card consumer HSD decoder. Intending to provide a secure alternative to the heavily pirated VCII, the companies manufactured several thousand decoder units but were unable to gain access to the marketplace for the same reasons that DECTEC

faced in 1991 and 1992, and which Titan appears to be facing today.[6]

The history of DECTEC's attempt to compete against GIC is well reported upon in the trade press.[7] It is also summarized in the comments filed by the Consumer Satellite Coalition at page 7, where the CSC states, "GIC engaged in a series of actions to keep DECTEC from entering the marketplace." [8]

[6] It is important to note that Oak Communications (TV Com) holds the North American rights to all but one of the basic digital encryption patents which make the VCII system possible. It was a team of engineers from Oak who joined M/A Com to develop the VCII system. M/A Com paid Oak Communications a licensing fee of $20 million for the use of the patents.

[7] Reports on DECTEC printed in Satellite Business News have been predominantly inaccurate and scurrilous. DECTEC's attorneys have warned SBN's publishers, on several occasions, to retract and refrain from printing slanderous statements about DECTEC. Therefore, we suggest that for a history of the abusive practices employed by GIC to keep DECTEC from competing in the HSD decoder marketplace, the Commission should consider reports in Multichannel News (9/16/91), The Times Colonist (9/8/91 & 3/7/92) EE Times (10/22/90, 1/7/91, 1/28/91 & 7/15/91) TVRO Dealer (2/91, 4/91, 6/91, 8/91 & 11/91), Satellite Retailer (12/91), Signal Magazine (6/91) and The Intellectual Property Reporter (6/14/91).

[8] It may be noted that we find GIC's claim that DECTEC is not " a member of our industry" (whereby "our" is spoken by General Instrument to mean "GIC's very own") rather tasteless. Our discussions with programmers have been extremely positive, though we found it an increasingly complex ordeal to disprove GIC's slanderous attacks. We have no reply to GIC's unprofessional objection to the reference to DECTEC in the NOI, and we are not surprised that GIC finds any idea of competition "deplorable".

IV. ACCESS TO PROGRAMMING AS THE CENTRAL ISSUE

Momentarily setting aside the technical debate, the real issue is access to programming. If programmers willingly and freely allowed competing encryption/decryption vendors to provide lawful authorizations of their services, this inquiry would have no foundation. However, in an environment trodden with anticompetitive maneuvering, a healthy and free thinking marketplace does not pervade.

It is interesting to note that the two programmers who responded to the inquiry, Home Box Office and PrimeTime 24, held contrasting views on the effects of competition in the decoder marketplace.

It is clear from the divergent platforms stated that where a programmer (HBO) depends heavily on his cable business or is owned by a cable system operator, he is also opposed to fostering a competitive HSD environment. On the other hand, a programmer (PrimeTime 24) who is independent and not vertically integrated or dependent on cable revenue, supports competition.

It is uncanny for instance that HBO in its comments on page 13 concludes that intra-VCII competition will increase security risks, whereas PrimeTime 24 remarks at page 3 that competition in the supply of VCII technology and equipment will enhance "the incentives for the delivery of secure systems."

HBO also seems to employ a rather incongruous logic when it says at page 3 that "the competitive forces that will shape this environment will not come from the C-Band analog equipment universe alone" and that in fact, more "significant" competition will come from inter-system competition, such as mid-power and high-power DBS.

HBO specifies that with the emergence of DBS, C-Band equipment prices will be forced to decrease in order to compete, thereby implying that GIC will lower its analog VCII Plus and RS module prices to keep TVRO sales competitive with services like DirecTv. On the surface, this sounds logical. However, to reach this conclusion, HBO must first presuppose that General Instrument is actually interested in decreasing VCII Plus and RS prices at a time when the company is bringing to market a backward compatible digital product.

HBO, then, states at page 5 that, "if C-Band analog equipment prices remain sufficiently higher than digital equipment prices, there will be business incentives to complete the transition to more secure and less expensive digital hardware expeditiously."

Taking the argument in its entirety, what HBO is actually saying is that GIC is in a position to cause prices in the C-Band HSD industry to increase such that the C-band analog industry is not able to compete against other technologies nor able to hang on to program services like Home Box Office.

V. THE EFFECTS OF AN ANTI-COMPETITIVE DECODER MARKETPLACE ON FREE TRADE

The FCC should note that any action or recommendation it may take with regard to this inquiry will have effects that stretch beyond the borders of the United States. GIC's stranglehold on the HSD decoder market has created difficult problems for Canada[9] and now threatens to similarly take control of the satellite subscription market in Mexico[10]. It is the intent of the Free Trade Agreement between the countries of North America that companies are to be provided with the ability to compete fairly and equally.[11]

[9] CANCOM, a satellite and cable television distribution service which was created by the Government of Canada, was the leading provider of home satellite decoders within Canada. The decoders distributed by CANCOM were independent of VCII technology, and they provided subscription service to the CANCOM programming package which was scrambled with Oak Orion equipment. GIC was able to usurp CANCOM's presence by intentionally "dumping" one million piratable VCII decoders into Canada. Canada's CRTC will conduct a hearing later this year.

[10] GIC was recently granted a general export license by the US Department of Commerce.

[11] Over one year ago, DECTEC was issued the first global export license for VCII compatible HSD consumer decoders by the Export Control Division of the Government of Canada. However, because GIC would not allow DECTEC access to its authorization center and because programmers were opposed to an independent facility, Canada was effectively barred from selling a highly secure consumer decoder to Mexico. With its de facto monopoly in place, General Instrument is in the position to control the development of the HSD market in Mexico thus hampering free trade.

VI. CONCLUSION

Fundamentally, intra-VCII competition does not exist because competing technologies cannot independently obtain fair and equal access to programming. It appears that the Program Access provision of the Cable Act of 1992 would guarantee competing distribution technologies (whether they are wireless, DBS, or competing HSD system providers) access to vertically integrated programmers.

It is also the intent of this Law to encourage competition among various multichannel video providers and to require programmers to supply their services fairly and equally to competing distribution technologies. It follows, then, that it is within the context of this Law that vertically integrated programmers may not favor one C-Band technology provider (ie - General Instrument) while excluding others.

As it is part of the FCC's responsibility to promulgate rules in accordance with the Program Access provision of the Cable Act of 1992, the timing of this decoder competition inquiry could not have been better. Considering the comments in this proceeding together with the Cable Act of 1992, DECTEC is optimistic that the Commission will find the least regulatory route to ensure that true competition may emerge.

Respectfully submitted by
John Grayson, CEO DECTEC Intl.